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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YASUSHI KOHNO and NORITOSHI KATSUTANI

Appeal 2008-3022
Application 09/837,020
Technology Center 3600

Decided: July 15, 2008

Before DONALD E. ADAMS, TONI R. SCHEINER, and
LORA M. GREEN, *Administrative Patent Judges*.

GREEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1, 3, 7, 13, 15, and 16. We have jurisdiction under 35 U.S.C. § 6(b). Claim 1 is representative of the claims on appeal, and reads as follows:

1. A method of preventing defective germination or growth of a plant comprising the steps of:

encapsulating at least one plant seed of a light germinator in an aqueous gel capsule having a moisture content of at least 90% by weight, the at least one plant seed having a size of 1 mm or less;

refrigerating the at least one plant seed under one of a humidifying condition or in an airtight container so that moisture is not lost from the aqueous gel capsule and under the condition that the at least one plant seed does not germinate; and

sowing the at least one plant seed.

The Examiner relies on the following references:

Hinkes	US 3,950,891	Apr. 20, 1976
Carlson	US 5,666,762	Sep. 16, 1997

We reverse.¹

DISCUSSION

Claims 1, 3, 7, 13, 15, and 16 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Hinkes and Carlson.

Hinkes is cited for teaching a method of encapsulating a natural, light germinating seed of less than 1mm (Final Rejection 2). The Examiner notes that:

¹ This Application has been previously before the Board as Appeal No. 2005-2520, decided December 20, 2005 (having the merits panel of Garris, Pak, and Kratz), in which the Examiner was affirmed. Claim 1 has been amended since that Appeal, and the Examiner now relies on different prior art than was relied upon in the previous Appeal.

Hinkes is silent on explicitly teaching that the coating is an aqueous gel capsule having a moisture content of at least 90% by weight and the steps of refrigerating the at least one plant seed under on of [sic] a humidifying conditions or in an airtight container so that moisture is not lost from the aqueous gel capsule and under the condition that the at least one plant seed does not germinate; and sowing the at least one plant seed.

(*Id.*)

Carlson is cited as evidence that:

[I]t is general knowledge in the art of plant husbandry to encapsulate seeds with an aqueous gel coat (Carlson, Col. 5 line 4-7) for long-term storage (Carlson abstract line 7) and to store the seeds under refrigerated conditions in an airtight container (Carlson Col. 22 line 61-67) so that the plant does not germinate and then plant the seed.

(Final rejection 2-3.)

The Examiner concludes:

It would have been obvious to one of ordinary skill in the art to modify the teachings of Hinkes with the teachings of Carlson at the time of the invention since the modification is merely the selection of a seed coat selected for its known advantage of improving germination as taught by Carlson (Carlson Col. 1 line 65-66). Hinkes teaches there is sufficient motivation in the art to modify a celery seed with a seed coat to improve mechanized planting (Hinkes Col. 1 line 50-53). Carlson is cited merely to teach that seeds coated with aqueous gel coats are old and notoriously well-known in the art along with the commonly practiced procedures of long-term storage of coated seeds.

(*Id.* at 3.)

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or

argument shift to the applicant.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citations omitted). In order to determine whether a *prima facie* case of obviousness has been established, we consider the factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966): (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the relevant art; and (4) objective evidence of nonobviousness, if present. An invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). “Often, it will be necessary . . . to look to interrelated teachings of multiple [references] . . . and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed[.]” *Id.* at 1740-41. “[T]his analysis should be made explicit” (*id.* at 1741), and it “can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does” (*id.*).

The Examiner argues that:

Hinkes and Carlson are teachings of general knowledge in the art of plant husbandry to coat a seed with an aqueous gel to enhance germination and to pelletize a seed that has an aqueous gel coat to utilize mechanized planting equipment i.e. combining the prior art elements according to known methods to yield known results.

(Ans. 6.)

As noted by Appellants (App. Br. 6-7), Hinkes teaches:

Investigations covering many combinations of coating materials were carried out. Only a small group were found which would accomplish the desired objectives. The present invention is based on the concept of employing a coating composition wherein the admixed materials have different swelling rates, so that when the dried coating is exposed to the moisture of the seed bed, there is a gradual swelling of the coating over a period of time, and this swelling continues after the hydration of the fastest swelling ingredient. The component having the slower rate of hydration continues to act as a binder during the hydration and swelling of the faster swelling component. This interplay of the forces generated causes one component to expand whereas the other component restrains the coating to insure that the coating will open or expand much like the opening of petals of a flower and then will fall away from the seed rather than merely swelling and staying in place. In this manner, the underlying seed is exposed to moisture, air, and light shortly after being planted. This contrasts with conventional coatings which remain on the seed after planting to shield the seed from light and air for a longer time.

(Hinkes, col. 2, l. 53-col. 3, l. 7.)

Thus, while Carlson teaches that “encapsulating natural seeds in hydrated gels can improve germination in some species” (Carlson, col. 1, ll. 64-67), the Examiner has not established that adding an aqueous gel capsule as taught by Carlson would perform the function of Hinkes, that is, that it will allow the coating of Carlson to open and expand and fall away from the seed, or that the gel coating will allow the seed to be exposed to moisture, air, and light shortly after being planted.

Therefore, we conclude that the Examiner has not set forth a *prima facie* case of obviousness, and we are compelled to reverse the rejection.

Appeal 2008-3022
Application 09/837,020

CONCLUSION

In summary, we conclude that the Examiner has not set forth a prima facie case of obviousness, and therefore reverse the Examiner's rejection of claims 1, 3, 7, 13, 15, and 16.

REVERSED

clj

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